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Open Data as driver of critical data literacies in Higher Education

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#OER20
#ODasOER



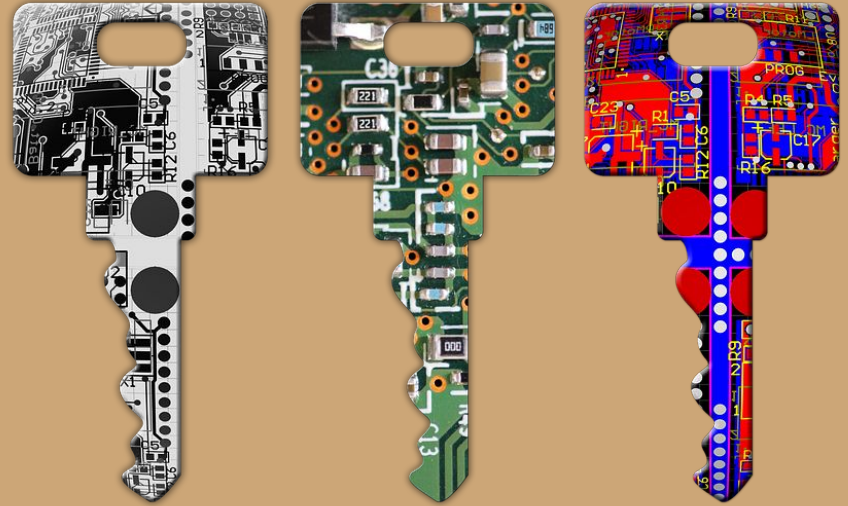
Open Data as driver of critical data literacies in Higher Education

...Which Data? Which Openness?
...Which Care?

Javiera Atenas, [@jatenas](#)
Leo Havemann, [@leohavemann](#)
Juliana Raffaghelli, [@Julianar71](#)

Which Data? Which Openness?

Some questions you might be asking
yourself before starting....



[Data Key Close](#)

Free image from Pixabay

Keys to Open...(?)

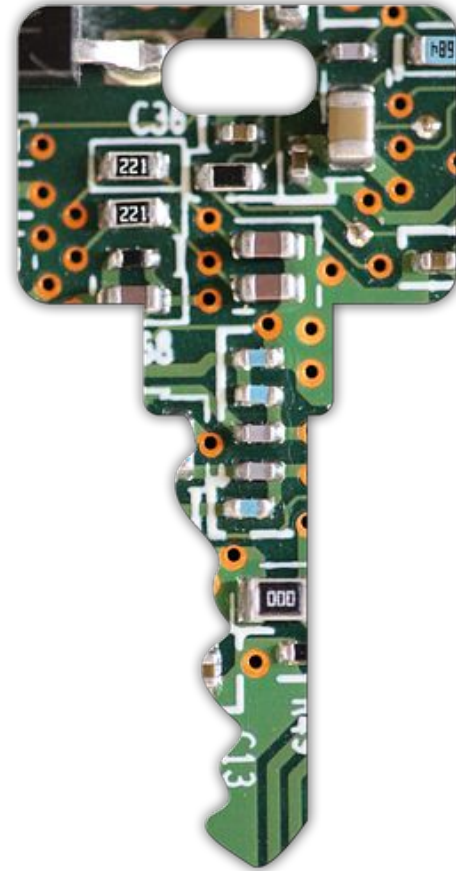
All citizens should have equal opportunities and multiple channels to access information, be consulted and participate. Every reasonable effort should be made to engage with as wide a variety of people as possible

(OECD, 2009, p.17).

It looks that this key opens!

Open data is data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike.

[http://opendatahandbook.org/guide/en/
what-is-open-data/](http://opendatahandbook.org/guide/en/what-is-open-data/)



Open Data Open Definition & Principles

- Availability and Access
- Re-use and Redistribution
- Universal Participation
- Complete.
- Primary.
- Timely.
- Accessible.
- Machine processable.
- Non-discriminatory.
- Non-proprietary.
- License-free.
- Comparable and Interoperable
- For Improved Governance & Citizen Engagement



The value of Open Data

- Civic Monitoring
- Resource for scientific communities
- Transparent research practices
- Scientific development and reproducibility
- Breaking the silos between Teaching and Research

<https://opendata-ajuntament.barcelona.cat/en/repte-barcelona-dades-obertes-2020>

Repte Barcelona Dades Obertes

Fomentem l'ús de les dades obertes als centres educatius de la ciutat



<https://stateofopendata.od4d.net/>

Where does OD come from?

- International agencies and organisations
 - Word Bank; United Nations; EU
- National Governments and their agencies
 - UKOD; GermanyOD; USA
- Local governments
 - Sardinia ; London; Barcelona
- Academic institutions and research centres
 - CERN
 - NASA
- Open Research Data Platforms
 - ZENODO
 - FIGSHARE

Which Care?

Some questions you might be asking yourself before starting....



How can OD be used in HE?

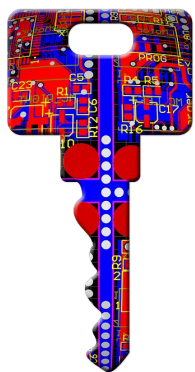
- Collaborating with researchers in real research projects
- Collaborating with students from other disciplines
- Creating scenario-based learning activities
- Collaborating with their local communities working on real problems

For the development of

- Critical skills
- Analytical skills
- Research skills
- Data literacies skills
- Teamwork skills
- Citizenship skills

See Atenas & Havemann (2015,) [Open Data as Open Educational Resources: Towards Transversal Skills and Global Citizenship](#)

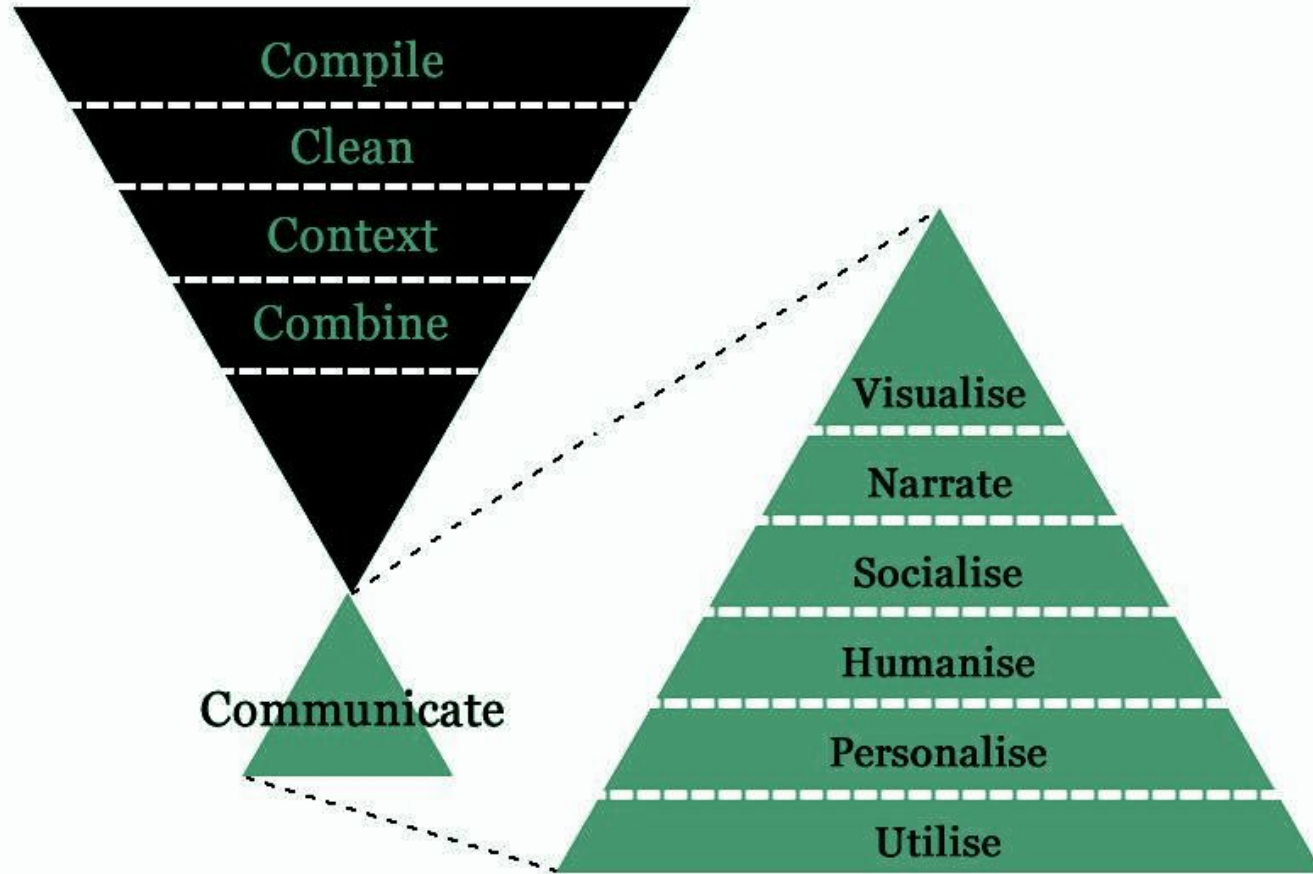
Open Data for Civic Engagement



Activity / Level	Initial	Intermediate	Advanced
All levels	Invite subject and data experts to discuss face to face or online with your students about local and global issues	Engage students with political and legal deliberations and discussions at local and global level asking to them analyse the data related to it	Establish a model for students to understand the process and engage them in policy making by reviewing and analysing data and official reports
Undergraduate	Engage students in evaluating facts and contrasting information by analysing data presented in news media	Encourage students to use digital tools to engage and monitor political activities and to assess reports and news by analysing their data	Support students in assessing data from their government to identify problems and compare local with global information
Postgraduate	Support students in identifying organisations that are campaigning in citizenship issues and enable instances for students to engage in civic monitoring activities and evaluate data driven arguments	Promote student collaboration with civil society organisations, in order to gain experience working with their data, supporting their activities, and enhancing their openness through data and publications	Support students in writing dissertations based on analysis of open data which engages with a real local or global problem; encourage them to publish findings in an open format

The Inverted Pyramid of Data Journalism (complete)

Paul Bradshaw, OnlineJournalismBlog.com



Open Data
for
Skills
Development

How to embed OD in T&L activities

- Identify and describe the learning outcomes for the intended activities;
- Identify the portals which will source the data;
- Clearly identify and describe the challenges students might face;
- Provide training materials for the software students will need to analyse the data;
- Support students in communicating their findings to local or wider communities.

Is that all about care in OD as OER?


Some questions you might be asking
yourself before starting....



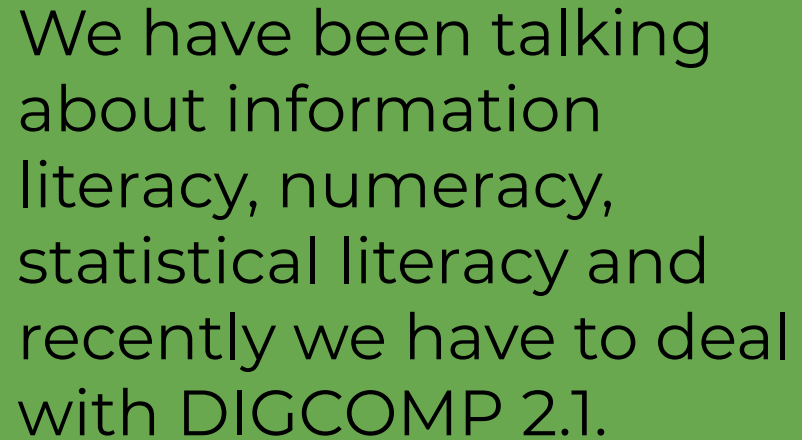
[Candado y llaves](#)

JR on Kevin Casper's photo

The “data” divide



We need Data Literacy...



We have been talking about information literacy, numeracy, statistical literacy and recently we have to deal with DIGCOMP 2.1.

Data Literacy concerns



ODI: Open Data Skills Framework



EU DIGCOMP 2.1.

Raffaghelli (2018), Educators' Data Literacy: Supporting critical perspectives in the context of a "datafied" education

The “data” divide

That's not enough, in times of datafication...

You mean...
Do we need a **critical perspective**?

Maybe. Let's see what the people here think about!

YOUR TURN!

LET'S MOVE TO MENTIMETER FOR SOME INTERACTION

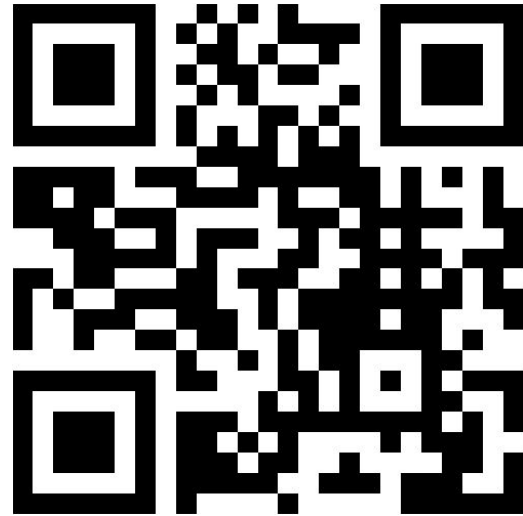
TYPE THE MENTIMETER CODE

- 1- Open another tab in your PC or mobile/tablet.
- 2- Type into your browser "menti.com"
- 3- Type into the box the number of this interaction:

31 69 86

SCAN THE QR CODE

...To work on your tablet or mobile



[Mentimeter is GDPR compliant](#)

DISCUSSION: THE TENSIONS

REACTIVE?

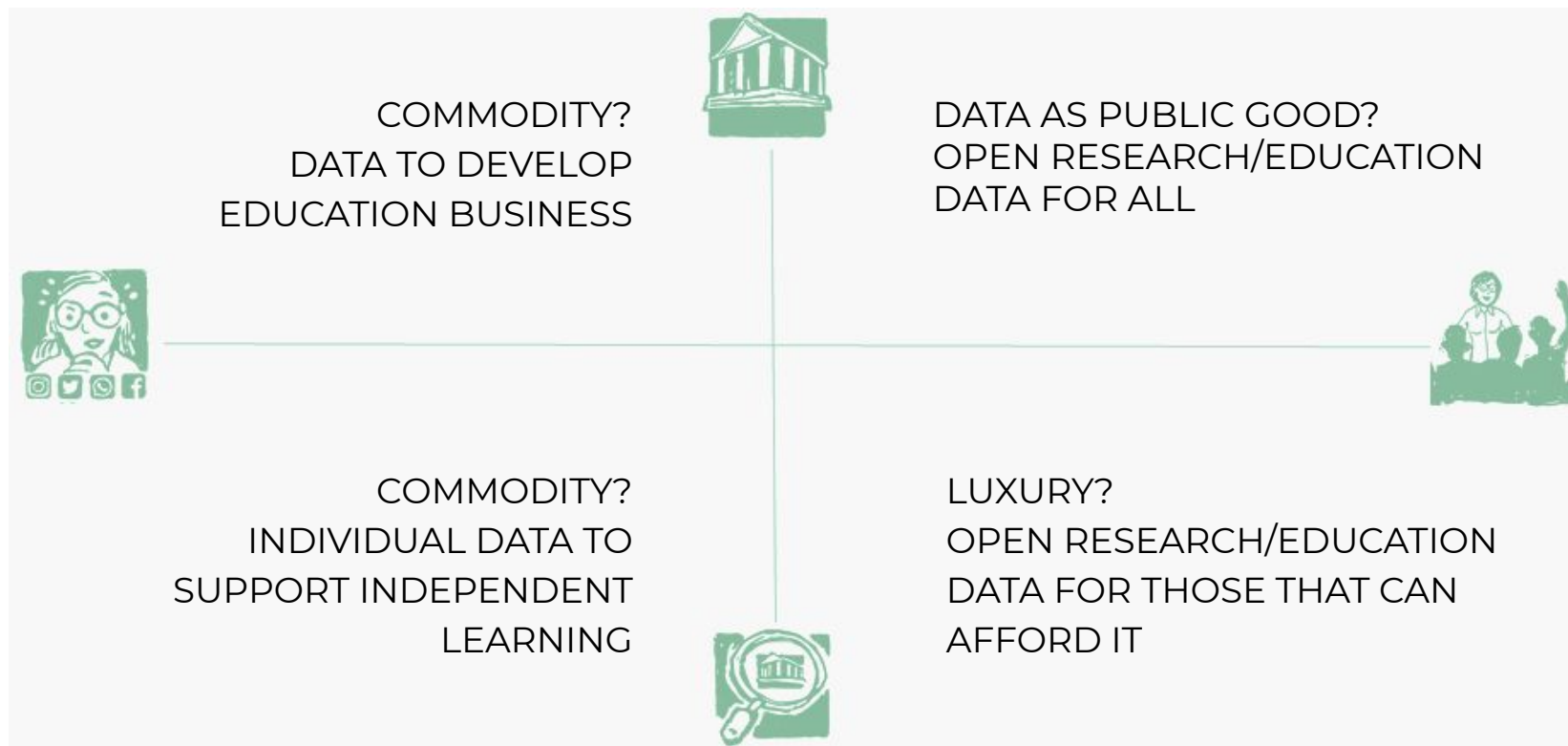
PROACTIVE?

NAÏVE?



(Based on Stefania Milan, "The alternative epistemologies of Data Activism" 2016)

DISCUSSION: THE TENSIONS



INTRODUCING A CRITICAL PERSPECTIVE OF DATA:

BUILDING THE LITERACIES TO THRIVE IN A DATAFIED WORLD

Ethics and Politics of data

- Promoting critical awareness on the data we generate as users/citizens/students.
- Understanding data as socio-technical structure

Techniques of data

- Data search, appraising, mining and preparing for analysis
- Data analysis (with basic or advanced tools)

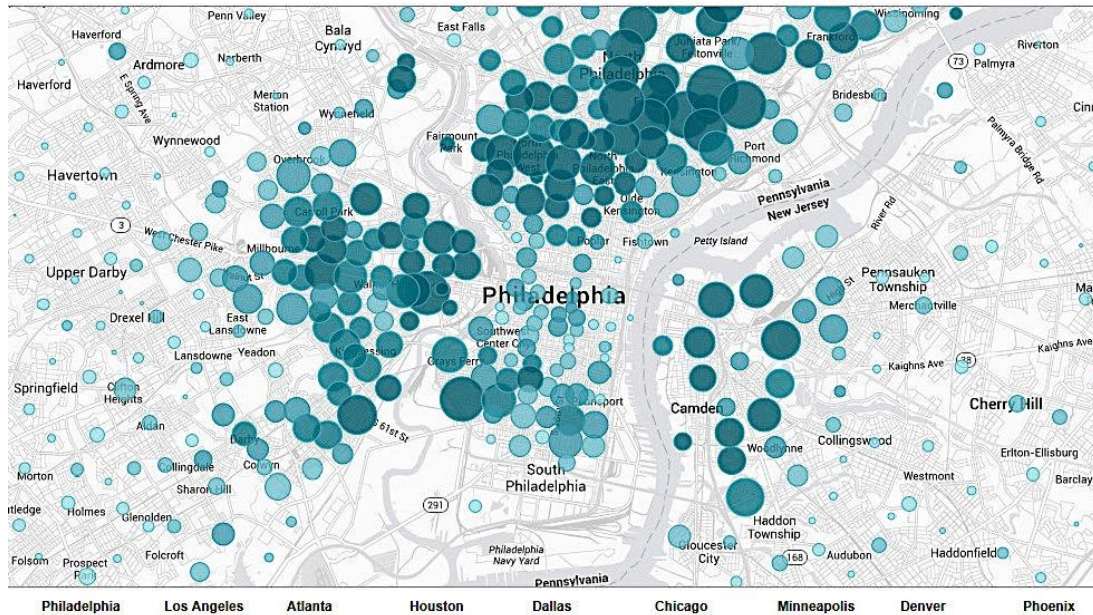
Aesthetics and narratives of data

- Semiotics of data: Data is a concept to represent the world. Consider why to you include it into your representation of the world
- The message: design, present and share your story

Open Data

Mapping Poverty in America

Data from the Census Bureau show where the poor live.



ATIKANON

Community Survey. County-level data from the 2012 Small Area Income and Poverty Estimates (SAIPE); socialexplorer.com.

To learn more about OD and Open Education

- Open Data as Open Educational Resources
<https://education.okfn.org/files/2015/11/Book-Open-Data-as-Open-Educational-Resources1.pdf>
- Open Data as Open Educational Resources: Towards Transversal Skills and Global Citizenship
<http://www.openpraxis.org/index.php/OpenPraxis/article/view/233>
- Open Data as OER
<http://education.okfn.org/the-21st-century-s-raw-material-using-open-data-as-open-educational-resources/>
- Open Data for Learning: A case study in Education
https://www.academia.edu/36926390/OPEN_DATA_FOR_LEARNING_A_CASE_STUDY_IN_HIGHER_EDUCATION
- Educators' Data literacy
<https://flore.unifi.it/retrieve/handle/2158/1150383/382004/2102%20interno.pdf#page=91>





MANY THANKS!

Javiera, Leo, Juliana

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